

REMARKS

Favorable consideration and allowance are requested for claims 1-3, 5, 8, 10, and 11, in view of the following remarks.

Status of the Application

Claims 1-3, 5, 8, 10, and 11 are pending in this application. Claims 1, 2, 4, and 10-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,958,974 to Prehofer (the “Prehofer patent”) in view of U.S. Patent No. 6,993,013 to Boyd (the “Boyd patent”). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Prehofer patent in view of the Boyd patent and further in view of U.S. Patent No. 7,245,610 to Kalmanek *et al.* (the “Kalmanek patent”). Claims 5 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Prehofer patent in view of the Boyd patent and further in view of the Kalmanek patent and U.S. Patent Publication No. 2005/0147052 to Wu (the “Wu publication”). Claim 6, 7, and 9 were previously cancelled. Claims 4, 12, and 13 have been cancelled by way of the present amendment. Claims 1, 3, 5, 8, 10, and 11 have been amended.

Rejections under 35 U.S.C. § 103(a)

According to the outstanding Office Action, the subject matter of claims 1, 2, 4, and 10-13 is rendered obvious by the combination of the Prehofer and Boyd patents. In response, Applicants respectfully submit that independent claim 1 is patentable for the reasons set forth below.

1. Prehofer does not teach any method of “call admission control.” Call admission control concerns calls that are still to be established. At the point of call admission control, the continuous stream of data has not yet been transmitted. If the call, not yet established, is dropped at step c), none of the continuous stream of data will ever be transmitted.

The initial part of the Prehofer patent (through col. 3, line 7) merely discloses maintaining a stable service, particularly in spite of network utilization changes. For example, in col. 2, lines 47 to 61, reference is made to a June 1995 publication that discloses the dynamic adjustment of bandwidth on the basis of transmission quality, for example, if there is a high network utilization. None of this is directed to call admission. It is merely concerned with maintaining quality of a transmission already underway.

The Office Action also refers to Fig. 1 of Prehofer. The description of Fig. 1 begins at col. 4, line 55. There is some description of the equipment involved and then an example of a data service. The example starts at col. 5, line 12:

In the example, a subscriber uses his/her subscriber terminal TLN, e.g. a personal computer, to dial into the packet-switching network PN via the connection to the access node ZK, and uses an application program provided on his subscriber terminal to set up a connection to a computer DK, providing data services, of a service provider, e.g. via the intermediate nodes ZWI to ZW4. The subscriber requests a video transmission service, for example, which requires a transmission bandwidth of 100 kbit/s. Accordingly, the data packets associated with the video transmission service are assigned to a mean quality class, for example, by setting a particular bit pattern in the “TOS byte” of such a data packet.

With respect to call admission, Applicants respectfully submit that this aspect of the Prehofer patent measures nothing, receives no feedback from

anywhere, and makes no decisions concerning packet loss or anything else to do with network conditions. It simply sets up a connection, selecting a class of service based on bandwidth required, not network conditions. There is no method of call admission described at all. The system merely sets up a connection, using an application program on the subscriber terminal.

Once the connection is set up, the Prehofer patent discloses the following, beginning at col. 5, line 37:

During transmission, an intermediate node, e.g. ZWL, or the receiver, e.g. ZK or TLN, acknowledges to the transmitter, in the example the computer of a service provider DK, the quality grade, such as the bandwidth, delay times to the network node and the packet loss rate for the transmission, using a protocol, e.g. the RTP/RTCP protocol mentioned in the introduction, and then compares the acknowledged quality grade with the demanded quality grade.

All of this is happening after transmission has started. It does not deal with call admission.

A demanded quality grade, the “NOMINAL” value, and an acknowledged quality grade, the “ACTUAL” value, are compared and it is possible to trigger “*a change to another quality class or possibly priority class*” (col. 5, lines 50-51 (emphasis added)). However, this is still not related to call admission.

The Office Action also cites col. 3, lines 11-18 and col. 5, lines 12-45 of the Prehofer patent as determining a demanded quality grade for a call that is to be established. Applicants respectfully submit that these passages are not related to a call that is to be established. Specifically, the lines cited in column 3 of the Prehofer patent state:

According to the present invention, therefore, a stable quality grade for such data services is provided by virtue of the fact that, *during the transmission of data packets which are associated with such a data service and are assigned to a quality class with the aim of possible preferential treatment*, these data packets are possibly assigned to another quality class, which is expected to provide the quality grade demanded by the data service.

(Emphasis added.) This relates to providing a stable quality grade during transmission of data packets associated with a data service. There is no disclosure or suggestion of reassignment between quality classes before any of the data packets are transmitted.

Applicants respectfully submit that the passage in column 5 of the Prehofer patent is not related to call admission. It is merely directed to maintaining quality of service after a connection has been set up by adjusting the quality class of data packets associated with a data service, during transmission, to achieve a demanded quality grade.

In contrast, the present invention is concerned entirely with call admission control. The Prehofer patent is silent about call admission control, apart from alluding to the fact that it can be done by “an application program provided on his subscriber terminal,” with no further disclosure.

2. The Prehofer patent does not teach a method of dropping a call. The Prehofer patent is primarily directed to maintaining acceptable conditions for calls already in transmission. Although the Prehofer patent recognizes that it might be necessary to terminate a transmission, it does not disclose how that might be done. And, in fact, dropping a call is exactly what the Prehofer patent is trying to avoid.

The Office Action cites col. 6, lines 16-40 in the Prehofer patent. However, there is no disclosure of data packets being dropped, but only data packets being raised in priority, through the priority classes of quality class B (normal) and, finally, into quality class A (premium). Even if “the influence on the transmission quality is too great,” the data packets are assigned back to the original quality class again: “If the influence on the transmission quality is too great, the data packets associated with the video transmission service can, if appropriate, be removed from this quality class and assigned to the original quality class again.” Prehofer patent, col. 6, lines 36-40. In this instance, the data packets will still be admitted to the network. This, of course, is not dropping a call.

The Boyd patent is solely directed to signaling messages, which, of course, are well-known. They occur between pieces of equipment to implement events but are not pro-active. If a user takes a telephone off-hook and subsequently presses a key for dial tone, this results in signaling messages providing:

- notification from the subscriber equipment to the network that the subscriber equipment has gone off-hook;
- acknowledgement from the network to the subscriber equipment of receipt of the notification;
- a request for dial tone from the subscriber equipment to the network;
- acknowledgement of the request for dial tone from the network to the subscriber equipment; etc.

If the signaling messages are lost or not triggered, a call will fail because events have not been implemented.

Signaling message will be sent and received during call admission, and a malfunction in the signaling messages will cause a malfunction in call setup, but the Boyd patent does not disclose or suggest a method of call admission control, only a sequence of signaling events that should occur during call admission.

The Office Action cites Fig. 5C and col. 15, lines 20-40 in the Boyd patent as teaching “determining an actual packet loss rate for the call prior to the call being established and dropping the call to be established if the actual packet loss rate is greater than the acceptable packet loss rate.” Applicants respectfully submit, however, that the Boyd patent has no such disclosure; it merely describes the analysis that occurs *after connection tear down has been initiated*.

In fact, a review of col. 15, lines 7-19 of the Boyd patent (*i.e.*, immediately preceding the passage discussed above) makes this clear:

The method then proceeds to step 238 where the signaling message analysis tool 138 searches the sorted protocol message file 140 for an ACK to the DLCX request for connection tear down from the other side of the connection. The ACK from the other side of the connection would be readily identified by the signaling message analysis tool 138 since the message would have the same call identifier as the ACK from the first side of the connection. If the signaling message analysis tool 138 locates the ACK from the second side of the connection, the method proceeds to step 240 where the signaling message analysis tool 138 compares the packets sent and received on the bearer path from both sides of the connection.

In other words, this connection is already being torn down. This is not a method of call admission. The system in the Boyd patent is merely trying to analyze what went wrong. Even if the tool 138 finds that there was excessive packet loss, it merely generates a message to indicate what happened. What the Boyd patent does is described at col. 15, lines 32-38:

If, however, the signaling message analysis tool 138 determines at step 242 that the rate of packet loss exceeds the pre-selected threshold value, then the method instead proceeds to step 244 for generation of a “Bearer Path Loss” event message using information from the DLCX request for connection tear down and the ACK messages from respective sides of the connection.

Call failure can occur at any stage as a result of bearer path loss. All the system in the Boyd patent is doing is analyzing and reporting why there was connection tear down. It has nothing to do with decision making on call admission.

The system in the Boyd patent works through all the signaling messages and in the end delivers a report for a service technician to act on, as described in col. 15, lines 64 to 67: “Once constructed, the signaling message analysis tool 138 may Email or otherwise deliver the summary of warnings and errors to a service technician coupled to the proactive analysis system 120.”

Applicants respectfully submit that for at least the foregoing reasons that the Prehofer and Boyd patents do not disclose or suggest the subject matter of claim 1. For at least the same reasons, claims 2, 4, 10, and 11 are patentable.

With respect to the remaining dependent claims, Applicants respectfully submit that none of the other cited references disclose or suggest the subject matter of claim 1 missing from the Prehofer and Boyd patents. Therefore, these claims are also patentable.

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If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket # 038665.56185US).

Respectfully submitted,

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